and Koch, but only about half a dozen instances have been recorded where the tumors occurred both peripherally and intracranially. When they occur inside the cranium the place of selection is the cerebellopontile angle, but they may occur on practically all the cranial nerves, the roots of the spinal nerves and even in the medullary substance itself. They are quite apt to develop on both sides at the same time, although peripheral symmetry is not an especial feature. There may be gradual progression or rapid progression and then betterment for even a number of years. Some authors believe the tumors develop into sarcomata at the time of this rapid growth. We must agree with Bruns who says that it is safe to assume that intracranial symptoms of compression are caused by a neurofibroma if one finds such tumors in the periphery, especially if the symptoms point to the cerebello-pontile angle.

Dr. Carl Wagner stated that the case later came under his observation and from the clinical findings and X-ray work a tumor was diagnosed in the region of the cerebellum. He operated, making a Cushing cross-bow incision which exposed both cerebellar hemispheres. The part of the bone which covered the occipital sinus was left to the last. Although an even exposure of both sides was made, the left cerebellar hemisphere bulged three quarters of an inch beyond the level of the right one. By raising the left hemisphere a dark gray, firm tumor mass was seen in the cerebello-pontile angle at a depth of 5 cm. As the patient was in bad condition no attempt at removal was made. The patient did not rally from the shock. No autopsy was held.

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The President, Dr. August Hoch, in the Chair

A STUDY OF THE MENTAL MAKE-UP IN THE FUNCTIONAL PSYCHOSES

By Dr. August Hoch, M.D.

The results were based upon work done by Dr. Hoch and Dr. Amsden of Bloomingdale Hospital. It was shown that by careful inquiries there are found in most cases of dementia præcox peculiarities in the mental make-up of the patients before the psychosis develops. These peculiarities are present many years before the onset of the psychosis, and it would be just as much forcing facts to regard them as premonitory symptoms of the disease as it would be to regard any pre-disposition as such. In a large percentage of the cases of dementia præcox he found what he termed the "shut-in" personality, the characteristics of which were detailed and illustrative cases were given. In material collected some years ago and in which these features had not been looked for specially, this shut-in personality was clearly mentioned in 35 per cent. of the cases, and in 16 additional percentage of the cases clear indications of it were found in the histories. This shut-in make-up is not the only type of personality in which dementia præcox might develop, but it is the most frequent and up to the present the most clearly circum-

scribed. As a control material a large number of cases of manic-depressive insanity and of melancholia were studied, and the results plainly showed that these psychoses develop in entirely different kinds of personalities; the typical shut-in personality was not once found in them, but these cases presented either what might be termed a "manic personality," or "a depressive personality." It is of interest to note that the former occurred chiefly in persons who had only manic attacks; it was found next often in those who had both manic and depressive attacks, and very rarely in those who only had depressions. The depressive personality occurred chiefly in patients who only presented depressions, never in persons who presented manias only, but it occurred also in a small proportion of cases with both manic and depressive attacks.

It was pointed out how a further elaboration of these studies, which the speaker is carrying on, will undoubtedly bring out important contributions to the question of etiology of these psychoses; and the importance of studying the immediate causes in relation to the make-up, *i. e.*, the natural reactions of the personality was especially urged.

Dr. Mabon asked whether that personality—the shut-in personality—is more marked in certain types than in others of dementia præcox, and, if so, in what type. In the manic depressive groups he noticed in the circular form that 5 per cent. were of the depressed type, and 25 per cent. or 28 per cent. of the manic type. Does that bear the same ratio to the attacks? In other words, were the manic attacks more numerous in those with a cheerful personality and the depressed attacks less. It seems to him that for those who are connected with institutions, and have so many cases to examine, it opens up a field for greater work and with the promise of better results. If we can train our young men to the importance of this, both the psycho-genetic factors, and also these personalities, because they are related and correlated—if we can bring about a better understanding of our cases when they are presented to the staff meeting, we can deal with them in a more intelligent way. We will have a better understanding of the etiology of many of these conditions.

He thought that we cannot get too strong statements, too definite statements, in regard to our patients. Very often we are inclined to be satisfied with very little, whereas the exercise of a little more patience would bring out facts of the greatest importance.

Dr. Diefendorf thought the crucial test is going to come when Dr. Hoch has had the opportunity of studying personalities among normal persons. In our daily experience with people at large, as well as with the insane, one is impressed with the fact that there is a great variety of personalities. It is really a question whether or not the percentages given by Dr. Hoch are going to stand out in such prominence when we have had the opportunity to determine the various percentages of personalities among people at large.

Dr. Allan McLane Hamilton said the work had been in line with his own work that he had followed and taught for a long time. It has for years been his belief that all insanities are nothing more than the dissolution of mental habits—some more than others. The tone, or "*motif*" you might say, of mentality in all individuals is certainly marked, and it is hardly necessary to say that the characteristics of no two persons are exactly the same.

It is reasonable there should be a marked change in particular forms of mental disorder with a preponderating influence of depressed and

elated contents in special psychoses. Those of us who study dementia præcox, and other forms, should have no trouble in understanding the mechanism and evolution of a peculiar form of disorder that is developed from certain early traits. The difficulty is that we do not recognize the fact of mental make-up and its differences in individuals, but wait until the psychosis is fully developed before we make serious attempt at analysis.

When the case is studied very thoroughly there should be no difficulty in adopting Dr. Hoch's statistics. His belief is that there is no such thing as a conventional mind, but that each individual develops in his own way. Some people are open, voluble, excited or elated. Others are secretive and come under the category of the class that Dr. Hoch has spoken of as "shut-in." Ultimately when they are subjected to sufficient change or stress, or any other adequate agency, disorganization takes place, and we find the appearance of the peculiar type of insanity. This is a very suggestive and an interesting paper, and if it leads all of us to study our cases in the beginning and take into account more of the conditions that precede the actual outburst of insanity, it will be a very valuable stimulus to future work. It certainly definitely formulates what we should all know.

Dr. Ashley said it appears from Dr. Hoch's paper that the psychosis is apt to be but an exaggeration of one's normal characteristics; that is, if an individual's normal temperament is as Dr. Hoch chooses to call it a "shut-in" one, then his psychosis is likely to be one of a "shut-in" type. Or if he is normally a lively, active individual, his psychosis is apt to be of a manic form. If these theories are borne out, then we may be able to predict with some degree of certainty the form of functional psychosis a given individual is likely to develop, if any. We may even go further and predict as to the outcome. Surely Dr. Hoch's studies should be followed up by others. The scheme offered for getting at the facts is an excellent one.

Dr. Carlos F. MacDonald said we have been accustomed to view insanity and to rest our diagnosis in some cases upon the fact that insanity is characterized by a very marked change in the individual and his personality, and with it a prolonged departure from the normal mental status, but he had long advocated that in many cases the change consisted of intensification of normal traits of character as correctly indicated in the studies by Dr. Hoch.

There is no standard, no common standard of sanity, departure from which constitutes insanity. There are no two personalities precisely alike, no two cases of insanity precisely alike and yet cases resemble each other in their mental symptoms sufficiently for the purposes of classification. Dr. Hoch's paper emphasizes the importance of determining, if possible, what the normal mental status of the individual is; his deportment, habits, heredity, birth, his education, his surroundings, his temperament, character, etc. Then we must compare the individual with himself and see wherein and to what extent he has departed from that, and not compare him with any other individual, because if it is a fact that no two persons think and act precisely alike, so that every individual has his own standard of sanity, departure from which in him might be significant of mental disease, then the only true standard of comparison is with the individual himself.

He thought Dr. Hoch has done a very important work here, and

one which has thrown new light, to him at least, upon the study of mental disease from a psycho-genetic standpoint, and one it is well to follow out.

Dr. Clark said in order to get a proper estimate of this personality study we need to have similar investigations made in those cases of "shut-in" personality that do not develop dementia præcox, that run a relatively benign life history in the every-day world outside of asylums. He thought we all see cases of this latter sort, not essentially different from Dr. Hoch's "shut-in" personality cases that do not develop dementia præcox. Evidently there are other psychogenic factors as well as real somatic causes at work in the genesis of dementia præcox. The one-sidedness of the study ought to be corrected by an all-round investigation of the somatic as well as psychogenic factors. Similar personality studies ought to be made in acquired neurasthenias, constitutional depressions, psychoneuroses and borderland cases. Such studies will be of real worth in analyzing the vague terms of predisposition and neuropathic constitutions now in common use. The summation of all these studies may ultimately enable us to construct a properly detailed plan of mental hygiene for adolescents for practical use among physicians, teachers and parents. Such a plan of medico-pedagogic training of personalities during the plastic age will be of signal aid in efforts at prophylaxis against the malignant psychic disorders of dementia præcox. The helpfulness and hopefulness of Dr. Hoch's study must appeal to us all.

Dr. Meyer said in the first number of his "Psychological Arbeiten," Kraepelin spoke of the probability of different constitutions; in the same year, in the fifth edition of his text-book he turned around completely with regard to dementia præcox of which he seemed to think that it was an autointoxication which any one could get. This seemed to stand in too glaring contradiction with the histories of our Worcester material. Paulhan's book "Les Caractéres" next stimulated Dr. Meyer to formulate his experience concerning the constitutional make-up in Stanley Hall's memorial number of the *Journal of Psychology,* in which Dr. Meyer tried for the first time to define more or less the practically important temperaments and constitutions, as judged from the results and the histories of patients. Surely there are among the so-called normal, or among who do not develop the psychoses, a great many shut-in personalities; but whenever he compared those with the shut-in personalities that go wrong, he finds differences, and it is just those differences which seem to throw the weight into the scales for the worse. He tried to describe this as a lack of sense for the real, the tendency towards the mystical, fantastic, and probably also other factors of habit-deterioration. He felt convinced that it is really along these lines that we can develop a mental hygiene, and that by these methods of the dynamic psychology we have not only worked towards something practical, but also towards the truer conception of mental disturbances.

It really does give one a different courage about one's appreciation of our knowledge of mental disease when one compares these things with the generalities like degeneracy and heredity, and the abstract psychological theorizing which may sound well but never fits the cases. With our present methods we try to handle what is at hand in the case, both in our prognosis and in therapeutics. To be sure, therapeutically, when we come to the actually broken down individuals we find that they are more fenced in than ever, more difficult to reach in the attack, and that

it is really a funeral we have to watch, unless the person recovers again to a sufficient extent to be approachable. But the prognosis and the prophylaxis have certainly been much more satisfactorily shaped by considering what the individual has as a foundation, as fighting stuff, as material of make-up, than by any of the principles that we had before. This is quite a different and a much more concrete help than the vague percentages of recovery mentioned in text-books but without any guidance concerning the reasons in each case.

It is very interesting again to note in these figures that 50 per cent. belong to a definite personality where the inquiry was not especially pointed to the matter, just as in general paralysis, 50 per cent., and later perhaps 70 or 80 per cent. were the figures of cases with fairly certain syphilitic infection. These are the figures which represent about the average standard of accuracy to which we may rise in statistics of etiology in mental disease.

Dr. Kirby thanked Dr. Hoch for this clear demonstration that types of personality can be grouped, and that certain types of make-up must be considered as factors in the genesis of mental disorders and have important bearings on the clinical form and outcome of a psychosis. The outline for examination presented by Dr. Hoch will be a great assistance as a guide in analyzing constitutions.

Our material in state hospitals does not lend itself readily to analyses of this kind. Our patients come from a very different social and intellectual stratum, and it is often difficult to get the facts for which we search. Those cases in which we do get good anamneses seem to confirm the conclusions reached by Dr. Hoch. One point he should like to discuss briefly: Is it not possible that in certain cases we are dealing, for a long time before the actual break down, with manifestations of a morbid complex rather than a special inherent type of personality? We know, for instance, that as a result of a shock or painful experience a person may exhibit a permanent alteration in behavior, capacity or mood, having acquired, in other words, what is often called a nervous disposition. It is probable that in hysteria, psychasthenia, etc., most of the so-called nervous traits and signs of instability have a connection with, or originate out of, some definite mental trauma which has preceded for a long time the actual attack which we recognize as a psychosis.

We find in dementia præcox some evidence of a similar type of mechanism as exists in hysteria, although of course there must be fundamental differences. We might therefore ask if the seclusiveness, sensitiveness, etc., which characterize a shut-in disposition are not manifestations of a complex of ideas related to a previous unpleasant experience or mental trauma. In some cases of dementia præcox the clinical picture which we call the psychosis is little more than an accentuation of certain symptoms and tendencies long manifest in the patient and having a relation to a dominant trend or complex of ideas. He would thus emphasize the importance of fixing, if possible, the time of the onset of the change in character and disposition, and seek for relation of this change to some definite experiences.

Dr. Hirsch said the question whether any individual might get either one of these two diseases, dementia præcox or manic depressive, is by all means to be answered in the negative as far as dementia præcox is concerned. Only those individuals are apt to get dementia præcox who *a priori* are of an inferior mental make-up, that is, showing a condition of degeneration in the broadest sense.

The question is whether we can group personalities in such a way as to predict mental disease in later life and the nature of such mental disease. In the first place he would like to put more stress on the disproportion between the various psychical factors, by which he means the predominance of any one factor, emotional, intellectual, etc., over another. If we study the cases from this point of view then we would undoubtedly see that those cases which Dr. Hoch calls the shut-in personality are those in whom there are certain abnormalities in the intellectual sphere and not in the emotional, the relation between the intellectual sphere and the other psychical factors is at fault. Such a predisposition leads to delusions in later life, or to delusions and hallucinations and finally to the disease which we nowadays are asked to call dementia præcox.

On the other hand, those cases in which the mental factor is at fault lead to hysterical manifestations or to a psychopathic condition and emotional psychoses, that is to say to any one of those psychoses which now go in this category of manic depressive insanity.

So far as manic-depressive insanity is concerned he was glad to see that Dr. Hoch is getting back to the old way of distinguishing between simple depressions, manias and circular psychoses. Dr. Hirsch still claims that it was a decided step backward for Kraepelin to take all of these different psychoses and put them in one great category, trying to make us believe that it was a new discovery.

Dr. Hoch's table shows that the etiological factor is an entirely different one in the acute manias and in the depressions. No depressive element appears in the make-up of the individual who gets acute mania, and, on the other hand, no maniacal element appears in those individuals who get acute depressions. If, as Kraepelin claimed, these forms were all one disease, why should this be so?

Dr. Stedman asked whether it is not possible to have cases of dementia præcox which are purely acquired, and which may come on in any personality where the shock is profound, where the amount of exhaustion is prolonged and excessive. It seems to him that one or two cases that he had seen could have eventuated in that way, but perhaps it is quite possible that he had not investigated the personality of those patients sufficiently. Now the term, the shut-in personality, is a very apt one up to a certain point. It is not quite comprehensive enough. Dr. Stedman knows one or two cases where it was not marked, but in all the cases he had found the element of hypo-conscientiousness.

Dr. Hoch said that the question which Dr. Mabon raises is an extremely important one, but, as Dr. Hoch had said in the beginning, he is not offering anything like a complete study, and is, as yet, unable to state whether there is any parallelism between the make-up and the *forms* of dementia præcox, or the *forms* of depression. If Dr. Diefendorf and Dr. Clark urge the study of the normal personality as a control, he can only repeat that he also would consider this to be very valuable, and that he took for comparison the benign psychoses, merely because he had that material at hand; he thinks it must be admitted that it did good service. He has no objection, if, in the manic personality, the motor side is emphasized; indeed, he has done so in what he has said, and if he spoke of it as essentially an open personality, it was with a view to bringing out the difference between it and the shut-in make-up so often found in dementia præcox.

Passing over to some other points mentioned in the discussion, he wished to declare that he had no desire to regard the mental causes as the only ones in dementia præcox. Why should not toxic influences or exhaustion, and the like, contribute; or why should not, as has been suggested, exhaustion produce a clinical picture very similar to that of dementia præcox? If that can be shown we should all welcome it as a distinct contribution. What he wished to claim, however, is, that in cases which later develop dementia præcox, the demonstration of personal peculiarities, of mental habits which naturally would not lead to an adequate handling of internal conflicts and the like—is another evidence which speaks in favor of the *importance of mental causes* in dementia præcox.

In answer to Dr. Kirby he would say that it is too early to make any statements regarding the nature or the ultimate significance of the peculiarities in the dementia præcox personalities which he had described. What seems of importance is that whatever they are we can express them in terms of mental habits and reactions, and he did not see any reason for denying the possibility that they might be modified by training. It is quite possible, as Dr. Kirby says, that in some cases these peculiarities might be acquired.

If Dr. Hirsh speaks of the personalities belonging in the dementia præcox-paranoia group, as intellectually abnormal, of those belonging in the manic-depressive group as emotionally abnormal, he can see, of course, that we have here the same conception which underlies the old distinction of intellectual and affective psychoses. In the first place, he is convinced that this conception does not agree with the facts and that even if such a forced distinction between affective and intellectual were to be made, everything speaks against the assumption that the difficulty in the personalities who develop paranoic states or dementia præcox is one in the intellectual and not in the affective sphere. This study was undertaken precisely for the purpose of taking the matter out of such vague conceptions with which, he, at any rate, never could do anything, and to obtain facts which we can at least clearly describe; and he agreed with Dr. Meyer, to whose studies on dementia præcox he owed a great deal of stimulation, that the vague terms of "degeneracy" and "heredity" furnish little that is satisfactory in this connection. The question is: What are, in a given set of cases, the signs of degeneracy, if that term has to be used, and what kind of reactions are inherited which endanger mental health?

Finally he wished vigorously to protest against the claim of Dr. Hirsch that the views of Kraepelin on manic depressive insanity represent a step backward. Even if Dr. Hoch's studies show that it depends to a certain extent upon the individual whether a mania or a depression develops, the essential relationship of the manic and depressive symptom complex is not touched by this, and remains, nevertheless, a well established fact which, though expressed by others before Kraepelin, has yet by no one been so clearly understood as by him. Is it not time to recognize, at last, that Kraeplin, with his conception of manic-depressive insanity, has shown us the way of analyzing the clinical pictures, which no one before him understood, namely, those of the mixed forms of manic-depressive insanity? These cases are not rare, and to have given us the key to their understanding and through them of symptoms found in many somewhat impure forms, is certainly a great step in advance.